

What is claimed is:

1. An apparatus for adjusting the vibratory amplitude of a roller drum, the apparatus comprising:

an eccentric shaft defining a longitudinal axis and being rotatably journalled in said drum;

5 an adjusting device for regulating the eccentric movement of said eccentric shaft;

a turning device operatively connected to said eccentric shaft for imparting a rotation thereto;

10 a force transmission mechanism connecting said turning device to said adjusting device and for transmitting an axially directed force from said adjusting device to said turning device to effect a rotation of said eccentric shaft;

said adjusting device including a guide screw;

15 a bearing assembly for connecting said force transmission mechanism to said guide screw so as to permit said force transmission mechanism to follow the rotation of said eccentric shaft relative to said adjusting device while at the same time transmitting force to said turning device in either direction along said longitudinal axis;

20 said adjusting device further including a journalling shaft defining a threaded bore for threadably engaging said guide screw;

a tube sleeve extending into said guide screw so as to define an interface therewith;

25 a spline connection at said interface for connecting said tube sleeve to said guide screw so as to permit a rotary movement of said guide screw while at the same time allowing displacement thereof along said longitudinal axis; and,

said adjusting device further including a driving device and a transmission interposed between said driving device and said tube sleeve for transmitting a rotary movement to said tube sleeve from said driving device.

2. The apparatus of claim 1, wherein said transmission incorporates a gear transmission.

3. The apparatus of claim 1, wherein said adjusting device has a regulating range; and, said apparatus further comprises a control unit for detecting and controlling the position within said regulating range.

4. The apparatus of claim 3, said control unit including means for monitoring a gear teeth passage in terms of number and direction of movement.

5. The apparatus of claim 1, wherein said force transmission mechanism comprises at least two actuating rods.

6. The apparatus of claim 1, further comprising a free-standing drive shaft running through the center of said adjusting device.

7. The apparatus of claim 1, wherein an adjusting motor and a drive motor are arranged in parallel.